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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,298	05/17/2005	Mark Jozef Willem Mertens	NL 021458	5801

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
LEE, PING	
ART UNIT	**PAPER NUMBER**
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,298	MERTENS ET AL.	
	Examiner	Art Unit	
	Ping Lee	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Courneau et al (hereafter Courneau) (US005987142A).

Regarding claims 1 and 9, Courneau discloses a data representation apparatus and a corresponding method for representing data (the location or the speech of the co-pilot) by means of an audio signal, said data representation apparatus comprising:

an audio processing unit for delivering the audio signal with a characteristic dependent upon a data signal (the signal representing the position of the pilot's head) having at least a first value and a second value; and

a mapping unit for mapping the first value of the data signal (together with co-pilot's signal) to a first position (e.g. to the left of the pilot) in three-dimensional space, and the second value of the data signal (together with co-pilot's signal) to a second position (e.g. to the back of the pilot) in three-dimensional space,

wherein the audio processing unit changes the characteristic of the audio signal (the apparent location of the co-pilot), resulting in the audio signal appearing, to a user (pilot) listening to the audio signal, to originate from the first position when the data signal has the first value, and from the second position when the data signal has the second value.

Regarding claim 2, Courneau shows a filter for applying a head related transfer functions to an input audio signal to obtain the output audio signal appearing to originate from the first position respectively the second position (8).

Regarding claim 3, Courneau shows the data signal distributor (bus 2) for delivering the data signal (the position of the pilot's head), derivable from a measurement from a measurement device (col. 2. line 48).

Regarding claim 4, Courneau shows that the mapping unit maps a collection of nominal values of the data signal (the position of the pilot's head with the co-pilot's speech) to predetermined regions of three-dimensional space (col. 1 and 2; Courneau shows the examples with the simulated sound sources in 3-dimensional space).

Regarding claim 6, Courneau shows the specification means (7 or 11).

Regarding claim 7, Courneau shows the selection means (col. 3, lines 13-33) for enabling presentation of a first set of data signal values by a first type of the audio signal and the second set of the data signal values by a second type of the audio signal.

Regarding claim 8, Courneau discloses a system for presenting data (the location or speech of the co-pilot) by means of an audio signal, said system comprising:

an audio source for supplying an input audio signal (co-pilot);

a source of a data signal (the position of the pilot's head) having at least a first value and a second value;

a sound production device (headphones); and

a data representation apparatus for presenting data (the location or speech of the co-pilot) by means of the audio signal,

wherein the data representation apparatus comprises:

an audio processing unit (binaural processors) for providing the audio signal to the sound production device with a characteristic dependent on the value of the data signal (the position of the pilot's head); and

a mapping unit for mapping the first value of the data signal (together with the speech from the co-pilot) to a first position (e.g. to the left of the pilot) in three-dimensional space, and the second value of the data signal (together with the speech from the co-pilot) to a second position (e.g. to the back of the pilot) in three-dimensional space,

wherein the audio processing unit changes the characteristic (the apparent location of the co-pilot) of the audio signal, resulting in the audio signal appearing, to a user (pilot) listening to the audio signal, to originate from the first position when the data signal has the first value, and from the second position when the data signal has the second value.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courneau.

Regarding claim 5, Courneau fails to explicitly show the positions on a curvilinear locus in three-dimensional space in the drawings. However, in view of the complete

disclosure of Courneau, it was well known to those in the art that the system as disclosed in Courneau is capable of performing this limitation. For example, as the pilot's head slowing turn from the beginning position (e.g. facing forward) to the left (facing left), the audio image (the speech with the localization) of the co-pilot would slowing shift from one position (e.g. on the right of the pilot at the beginning position) to the final position (e.g. to the back of the pilot) on a curvilinear locus in three-dimensional space. The audio image is not limited to the co-pilot's speech. The audio image could be from any audio source that is coupled to the pilot's headphones.

Regarding claim 10, Courneau fails to explicitly show a computer program and a data carrier respectively. Courneau teaches a computer (13) being used for controlling the localization and sound sources. With one element being a computer, one skilled in the art would have expected that the entire processing method processed by processor (1) in Courneau could be implemented by a computer program for providing the required processing step of a computer. Of course, with a computer program, it has to be stored in some media that reads on the claimed data carrier. Thus, it would have been obvious to one of ordinary skill in the art to modify Courneau by using a computer program for implementing the required processing steps as disclosed in Courneau in order to streamline the processing from the computer (13) to other elements in the processor (1).

Response to Arguments

5. Applicant's arguments filed 1/3/07 have been fully considered but they are not persuasive.

On p. 9, applicant argued that Applicants therefore submit that Courneau et al neither discloses nor suggests "a mapping unit for mapping the first value of the data signal to a first position in three-dimensional space, and the second value of the data signal to a second position in three-dimensional space, wherein the audio processing unit changes the characteristic of the audio signal, resulting in the audio signal appearing, to a user listening to the audio signal, to originate from the first position when the data signal has the first value, and from the second position when the data signal has the second value".

As indicated in the paragraph above, the amended claims still read on Courneau. The claimed data signal reads on the signal representing the position of the pilot's head. For sake of explanation, examiner provides an example regarding the position of the pilot's head. If the pilot's head is facing forward, the data signal has a first value. If the pilot's head is facing right, the data signal has a second value. The mapping unit in Courneau would map the data signal (together with the co-pilot's speech) to a first position (to the left of the pilot), and to a second position (to the back of the pilot's head).

Conclusion

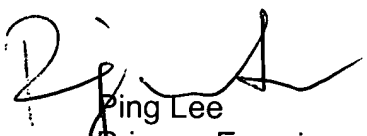
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ping Lee
Primary Examiner
Art Unit 2615

pwl